



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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March 12, 2014

TO: Each Supervisor
FROM: Gail Farber *Gail Farber*
Director of Public Works

BOARD MOTION OF JANUARY 7, 2014, AGENDA ITEM 61-B ENHANCING LOCAL WATER SUPPLIES, INCLUDING CLOUD SEEDING AND NEW TECHNOLOGIES

On January 7, 2014, your Board directed Public Works to report back on enhancing local water supplies, including cloud seeding and new technologies. Attached is the report on Status of Cloud Seeding Activities and Related New Technologies for Stormwater Capture and Groundwater Recharge to Enhance Local Water Supplies.

If you have any questions regarding the report, please contact me at (626) 458-4002 or your staff may contact Massood Eftekhari, Deputy Director, at (626) 458-4016.

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Attach.

cc: Chief Executive Office (Rita Robinson)
County Counsel
Executive Office

Board Office Executive Summary

Status of Cloud Seeding Activities and Related New Technologies for Stormwater Capture and Groundwater Recharge to Enhance Local Water Supplies

On January 7, 2014, the County of Los Angeles Board of Supervisors (Board) instructed the Director of the Department of Public Works (Public Works) to report back on enhancing the water supply, including cloud seeding and any new technology that has been developed since Public Works' last report. Following is a brief description on past cloud seeding activities, new technologies, and the status of our current efforts.

Past Cloud Seeding Activities

The Los Angeles County Flood Control District (District) engaged in a cloud seeding program utilizing North American Weather Consultants, Inc., from 1957 through 1962. This program determined that cloud seeding was effective in the San Gabriel Mountains within Los Angeles County. Since then the District has intermittently performed cloud seeding activities to increase local water supplies. Suspending or resuming these activities have been largely dependent upon either public perception of flooding, or an evaluation of the potential for excessive storm runoff and debris flows associated with wildfires within the targeted watersheds.

New Technologies

Current cloud seeding technology involves releasing silver iodine into the air when storm clouds are present. While other agencies, such as the Santa Barbara County Water Agency currently utilize aircraft with flares to deploy the silver iodine, the method employed in Los Angeles County involves releasing the silver iodine with ground based generators located in the foothills in order to take advantage of orographic (upslope

enhancing) effects. Our research indicates that this technology and methodology have proved effective in increasing the amount of rainfall from storm clouds by up to 10 percent to 15 percent and is considered “state of the art” for implementing a cloud seeding program.

Since the last time cloud seeding was employed in Los Angeles County, new hydrologic sensors with expanded telemetry have been added in the region and improved forecasting tools, such as enhanced satellite and radar imagery, have been developed. These regional real-time monitoring systems increase Public Works’ ability to assess storm systems and hydrologic conditions which results in enhanced capture and recharge of stormwater at dams and spreading grounds. These new capabilities could also provide better information to determine, on a storm by storm basis, when and where cloud seeding would be most effective while reducing potential risk of contributing to additional runoff and debris flows from burned watersheds.

Current Efforts

Currently, we are exploring the possibility of reactivating a cloud seeding program to augment local water supplies. Over the next several months, we will be evaluating Countywide watershed conditions and their recovery from recent fires. We will also consult with other agencies and experts in the region currently implementing cloud seeding programs to identify any issues and constraints they have experienced. Based on these investigations, we will determine the extent to which a cloud seeding program can be successfully and safely implemented. Thereafter, we will return to your Board

for expert consultant contract approval followed by certification of the appropriate environmental document and associated Program approval.

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